

REMARKS

Applicant appreciates the indication that its prior response was persuasive and appreciates the examiner's continued efforts to advance this application on its merits. However, Applicant respectfully takes issue with the rejection of claims 1-32 as obvious under 35 U.S.C. § 103(a) over Corazza (US 6,563,810 B1) in view of Gopalakrishnan (US 6,859,446 B1).

Particularly, the examiner's representation of the teachings of Corazza and Gopalakrishnan is, respectfully, technically incorrect. These technical errors introduce significant factual errors in the examiner's determination of the differences between the references and Applicant's claims, which is a key element of the basic factual inquiries for determining obviousness, as set forth in Graham v. John Deere Co. of Kansas City, 383 U.S. 1. Under the Graham framework, the examiner must, among other tasks, (1) determine the scope and content of the prior art, and (2) ascertain the differences between the claimed invention and the prior art. The Patent Office's recently issued document, "Examination Guidelines for Determining Obviousness Under 35 U.S.C. 103 in View of the Supreme Court Decision in *KSR International Co. v. Teleflex Inc.*," emphasizes that "*Office personnel fulfill the critical role of factfinder when resolving the Graham inquiries,*" and that "*[w]hen making an obviousness rejection, Office personnel must therefore ensure that the written record includes findings of fact concerning the state of the art and the teachings of the references applied.*" (Emphasis added.)

The written record will not support the obviousness rejections of claims 1-32. As a first factual error, the rejection arguments state that with respect to claim 1, Corazza discloses a method of tracking mobile station power headroom at a wireless communication network base station. This assertion is contradicted by the teachings of Corazza. In Applicant's claim 1, the base station receives a power headroom report from a mobile station, correspondingly stores a headroom value for the mobile station, and then updates that stored headroom value to track

changes in the transmit power of the mobile station based on reverse link power control associated with the mobile station.

In contrast, Corazza teaches—indeed, emphasizes—that transmit power headroom is information located at the mobile terminal, not at the base station. Corazza's Abstract plainly states that a subscriber station 102 (mobile terminal) determines a transmit data rate based on the amount of data queued for transmission, and then adjusts that rate based on transmit power headroom. Step 102 in Fig. 1A of Corazza teaches a subscriber station 102 adjusting its maximum transmit rate based on transmit power headroom. Corazza at col. 4, line 7, states that each subscriber station adjusts its data rate based on its transmit power headroom. Corazza at col. 3, lines 30-36 and at col. 4, lines 22-24, emphasizes that transmit power headroom information is located at subscriber stations (and, implicitly not at base stations). Corazza at col. 13, lines 53-60 teaches that the transmitter 528 of a subscriber station provides a signal to a rate allocation control processor 522 of the subscriber station, indicative of the amount of power headroom available for transmission of the current data packet. Corazza further teaches that, in response to this signal, the rate allocation control processor 522 adjusts the transmit data rate. Critically, these operations are internal to the subscriber station, and the transmit power headroom is not transmitted from the subscriber station.

Put simply, there is not a single instance in Corazza where the transmission of transmit power headroom from a subscriber station to a base station is taught, or even suggested. By definition, then, the assertion that Corazza's base stations track subscriber station transmit power headroom is wholly unsupported. The rejection arguments asserting that Corazza provides such teachings are contradicted by the factual record. None of the Corazza sections cited by the examiner in the rejection of claim 1 provide any support for the rejection arguments. Indeed, all of the subscriber-station teachings in Corazza emphasize that transmit power headroom information for each subscriber station resides in each subscriber station, and is used

in each subscriber station for transmit data rate adjustments. It is evident that the examiner has failed to establish any factual basis for rejecting claim 1 as obvious over the combination of Corazza and Gopalakrishnan.

Moreover, the use of Gopalakrishnan as a secondary reference allegedly teaching base stations storing headroom values for mobile stations based on received headroom reports is fundamentally flawed and not supported by the teachings of Gopalakrishnan or Corazza. Specifically, Gopalakrishnan explicitly directs its teachings to a transmitter or base station that transmits to a mobile station information about the transmit power that will be available at some future time at the transmitter or base station, for transmitting to the mobile station. The mobile station thus obtains knowledge about how much transmit power will be used by the transmitter/base station for transmitting to it, so that the mobile station can determine the maximum data rate that should be used for transmitting to it, in view of prevailing interference conditions.

It is gross technical error for the examiner to assert at the bottom of p. 3 in the Office Action that Gopalakrishnan's "available transmit power" can be read as Applicant's claimed mobile station "transmit power headroom." The entire body of Gopalakrishnan's teachings make clear that the term "available transmit power" means the transmitter or base station power that will be available for transmitting to mobile stations. Thus, the factual basis presented by the examiner for using Gopalakrishnan is self-evidently erroneous and contradicted by the written record.

Still further, there is no technical or logical basis for the proffered "motivation" for why combining Gopalakrishnan with Corazza would have been obvious, which appears on p. 4 of the Office Action. The examiner states that the combination would have been obvious "to integrate voice and data services onto a same frequency channel using available transmit power information to determine data rates."

The plain teachings of Corazza and Gopalakrishnan contradict the proffered motivation. First, it is beyond argument that Gopalakrishnan is directed to downlink transmissions from a transmitter or base station to a mobile station. In that context, Gopalakrishnan's "available transmit power" means the network transmitter/base station power that will be available for transmitting to a mobile station. That information allows Gopalakrishnan's mobile station to decide what data rate it can receive data at, in view of interference conditions. In contrast, Corazza makes clear that it is concerned with managing reverse link data rates (opposite direction from Gopalakrishnan), and that it fundamentally relies on the fact that subscriber stations have more of the information needed to determine the appropriate reverse link data rates. See, e.g., Corazza's Summary at col. 4, lines 17-30, where Corazza states that an objective of its invention is to place reverse link data rate allocation under subscriber station control, because the subscriber station has transmit power headroom and other information, and that signaling that information to a base station would be undesirable.

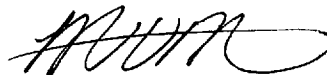
Further, Corazza relates to a Code Division Multiple Access (CDMA) communications network, where the same carrier frequencies are used for different channels, and channelization is performed by using different CDMA codes. CDMA systems such as used on Corazza fundamentally can transmit voice and data on the same frequency, and it is without technical merit to suggest that Gopalakrishnan's teachings somehow are relevant to achieving that function.

At least for the reasons above, the obviousness rejection of claim 1 and its dependent claims fails as a matter of law. All such rejections should be immediately withdrawn. Further, remaining independent claims 11 and 22 both include limitations substantially like those appearing in claim 1. As such, the obviousness rejections of claims 11, 22, and their dependent claims, fail as a matter of law and should be immediately withdrawn.

Applicant believes that all claims stand in condition for allowance over the cited references, and looks forward to an indication as such from the examiner. The undersigned encourages the examiner to call, if there are any questions regarding this response, or the further examination of this application.

Respectfully submitted,

COATS & BENNETT, P.L.L.C.



Michael D. Murphy
Registration No.: 44,958

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1400 Crescent Green, Suite 300
Cary, NC 27518
Telephone: (919) 854-1844
Facsimile: (919) 854-2084